Government of the District of Columbia
District Department of the Environment

Lead and Healthy Housing Division

Lead Facts & FAQ

The What, When, Where, Who, and Hows of Lead poisoning .....

The What .....Lead Facts ... What you should know about lead poisoning.

- Lead paint was banned from U.S. residential paint in 1978.
- Children under the age of eight are most at risk.
- Children from every region, race, and socioeconomic level are at risk
- There are usually no discernable symptoms to lead poisoning.
- Even children who appear healthy can have dangerous levels of lead in their blood.
- Lead poisoning is preventable.
- Most lead poisoning happens at home.
- The primary source of lead poisoning to children is by way of lead dust ingestion. This dust is created when lead paint deteriorates from age, exposure to the elements, water damage, friction and/or during remodeling, repair or renovation.
- Lead dust is invisible, so tiny in fact that it passes through most masks & filters.
- Lead poisoning affects adults as well as kids.
- Childhood lead poisoning is the number one environmental health risk facing children in industrialized countries today.
- Lead is a powerful neurotoxin that hurts almost all body organs, particularly the kidneys, red blood cells, and central nervous system. In young children, lead retards the development of the central nervous system and brain.
- Most children are poisoned by lead-based paint in their home.

Who is at greatest risk?

Young children and pregnant woman are at greatest risk when it comes to lead poisoning. Children under the age of eight, especially the toddlers, are at greatest risk for elevated BLLs because of increasing mobility during the second year of life, resulting in more access to lead hazards. Children between the ages of 12 and 36 months are also more than likely to be exposed to lead when compared with older groups because their normal hand-to-mouth activities may introduce many nonfood items, albeit lead dust, into their digestion system.

The number one thing to remember is that any lead, at any level, can be potentially harmful. The normal level of blood lead is zero, as there is no safe level of lead.

- Children absorb up to 50 % of the lead they ingest while adults on average only absorb about 10 to 15 % of the lead that they ingest.
- Children from all social and economic levels can be affected by lead poisoning, although children living at or below the poverty line who live in older housing (pre-1978) are at greatest risk.
- Lead exposure can harm young children and babies even before birth; i.e. through pregnant women.
- You can get lead in your body by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.

How are children exposed to lead?

A significant amount of lead exposure cases among U.S. children is lead-based paint and lead-contaminated dust found in deteriorating buildings. Lead-based paints were banned from commercial use in housing in 1978.

Other sources of lead poisoning are related to:

- work (home renovation, remodeling, etc.)
- drinking water (lead pipes, solder, brass fixtures, valves can all leach lead)
- home health remedies (azarcon and greta, which are used for upset stomach or indigestion; pay-loo-ah, which is used for rash or fever).

Can lead poisoning be prevented?

Lead poisoning is entirely preventable. The key is in stopping children from coming into contact with lead and treating children who have been poisoned by lead.

If so, How ?

- Lead hazards in the home must be removed.
- Public and medical professionals alike, need to be educated about lead poisoning and how to prevent it.
- At risk children need to be tested, and, if necessary, treated.

Lead poisoning can be prevented by taking simple precautions around the house. These methods include the following steps:

- Cleaning up paint chips and peeling paint.
- Washing floors, countertops and window sills weekly with an all-purpose detergent or a detergent specifically formulated to remove lead dust.
- Feeding children a diet high in iron, calcium and vitamin C and low in fat.
- Using proper safety measures when renovating or remodeling your house as to not disturb lead paint and other sources of lead.
- Washing a child's hands, mouth and face and toys often.
- Allowing the cold water to run for several minutes in the morning before using it for drinking, cooking or mixing infant formula in case lead pipe or solder is present.
- Removing shoes when coming indoors so lead dust is not tracked inside.
- Laundering work clothes separately from other clothes.
- Not serving or storing food in pottery made outside the United States.

What are the symptoms of lead poisoning?

Lead poisoning has no obvious signs, and most children do not report any abnormal symptoms. Symptoms of lead poisoning are often subtle and hard to recognize even to an experienced pediatrician. Typical symptoms more often than not can mimic that of a simple flu, stomach ache or even headache. So how then, would you know for sure whether or not your child has a lead-related problem, simple, get the child tested for lead

What kinds of complications can lead poisoning cause?

Lead poisoning is related to a number of serious health problems. A lead poisoned child is susceptible to a wide range of health effects and these health effects can vary from child to child. Even low levels of lead exposure can result in learning disabilities, behavioral problems, slowed growth and hearing problems. Children aren't the only ones affected by lead poisoning, adults too, are susceptible to various health effects that include reproductive problems, high blood pressure, memory problems and muscle and joint pain. Convulsions, coma and death can

occur at higher lead levels. Some recent studies claim that childhood lead poisoning can contribute to problems later in life, such as academic failure, juvenile delinquency and high blood pressure.

How can I tell if my child has lead poisoning?

The only way to diagnose lead poisoning is by having a blood test. Get the child tested for lead.

How To Test Your Child For Lead

Blood Lead Level Test : A blood lead level test measures the amount of lead in the patient's blood, not the amount of lead stored in the body. Blood lead levels are reported in micrograms per deciliter (μg/dl), or micrograms per 100 grams (μg/100 g) of whole blood, which is approximately equal to μg/dl.

- For adults', the standard set by the Center for Disease Control for elevated blood lead level (BLL) is 25 micrograms per deciliter (25 μg/dl) of whole blood.
- The standard CDC level set for a child is much lower; currently it is 10 micrograms per deciliter (10 μg/dl) of blood.

How is lead poisoning treated?

Up until now, there is no known effective treatment for children under the age of eight who have blood lead levels under 45μg/dL; the majority of children exposed to lead. The primary treatment for mild lead poisoning is to, *stop the exposure*. There is a positive correlation between lead exposure and lead poisoned children, therefore the removal of the source of lead is critical to reducing blood lead levels. Children with lead levels greater than or equal to 45μg/dL should immediately receive chelation therapy, a medical treatment that draws some of the lead out of their system. However, with that being said, children should not be used as lead detectors. For decades, nothing was done to prevent lead poisoning until a child was finally identified as lead poisoned. This means that it is inevitable that many more children will continue to get exposed to lead year after year, unless, parents are made aware of and are properly informed about how to prevent childhood lead poisoning. The peak ages of risk for lead poisoning are between 12 months and 24 months of age, these are the most important points in time in which to get children tested. Ideally, all children under the age of eight should be tested at least once.

What can the public and parents do to reduce blood lead levels?

- Ask your doctor to test your child for lead.
- Talk to your state or local health department about testing paint and dust from your home for lead if you live in a house or apartment built before 1978, especially if young children live with you or visit you.
- Use only cold water from the tap for drinking, cooking, and for making baby formula. Hot water is more likely to contain higher levels of lead, and most of the lead in household water usually comes from the plumbing in your house, not from the local water supply.
- Avoid using home remedies (such as azarcon, greta, pay-loo-ah) and cosmetics (such as kohl, alkohl) that contain lead.
- Take basic steps to decrease your exposure to lead (for example, by showering and changing clothes after finishing the task) if you remodel buildings built before 1978 or if your work or hobbies involve working with lead-based products.

Regardless of age, race or economic level, we are all susceptible to lead poisoning, especially children. Children are more likely to ingest lead dust because they place their hands, as well as other objects they come into contact with, into their mouths. Their small bodies will absorb/retain, more or less, about 50% of the lead they ingest and the lead will therefore harm them more than adults because their bodies are still growing.

Adults with certain occupations that expose them to lead can get lead poisoning as well. These jobs include battery manufacturing and recycling, construction work, auto repair and lead smelting. Workers in these occupations can unknowingly carry lead dust home from the workplace and expose their families. Lead poisoning also can be passed from a pregnant mother to her unborn child.

How do you determine if you have lead in your home?

As a rule, the older the building, the more likely it is that it has lead. According to HUD...

- 90% of pre-1940 buildings have lead.
- 80% of pre-1960 and,
- 62% of pre-1978 buildings have lead.

The best way to find out if your home potential lead paint hazards is to have a risk assessment performed by a certified inspector.

Health effects of lead

Childhood lead poisoning remains a major environmental health problem in the United States.

- People can get lead in their body if they:
  - Put their hands or other objects covered with lead dust in their mouths.
  - Eat paint chips or soil that contains lead.
  - Breathe in lead dust, especially during renovations that disturb painted surfaces.

- Lead is more dangerous to children because:
  - Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.
  - Children's growing bodies absorb more lead.
  - Children's brains and nervous systems are more sensitive to the damaging effects of lead.

- If not detected early, children with high levels of lead in their bodies can suffer from:
  - Damage to the brain and nervous system
  - Behavior and learning problems, such as hyperactivity
  - Slowed growth
  - Hearing problems
  - Headaches

- Lead is also harmful to adults. Adults can suffer from:
  - Reproductive problems (in both men and women)
  - High blood pressure and hypertension
  - Nerve disorders
  - Memory and concentration problems